

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
29 September 2005 (29.09.2005)

PCT

(10) International Publication Number  
**WO 2005/090508 A1**

(51) International Patent Classification<sup>7</sup>: **C09J 167/02,**  
7/00

N-4532 Le Terneuzen (NL). **DICKIE, Brian, D.** [NL/NL];  
Jan Van Galenstraat 28, N-4535 BX Terneuzen (NL).

(21) International Application Number:  
PCT/EP2005/003241

(74) Agent: **RAYNOR, John**; Beck Greener, Fulwood House,  
12 Fulwood Place, London WC1V 6HR (GB).

(22) International Filing Date: 23 March 2005 (23.03.2005)

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
04251678.1 24 March 2004 (24.03.2004) EP

(71) Applicants (*for all designated States except US*): **THE DOW CHEMICAL COMPANY** [US/US]; 2030 Dow Center, Abbott Road, Midland, MI 48640 (US). **DOW BENELUX B.V.** [NL/NL]; P.O. Box 48, 4530 AA Terneuzen (NL). **DOW EUROPE GMBH** [CH/CH]; Bachtobelstrasse 3, CH-8810 Horgen (CH).

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **KRABBENBORG, Franciscus, J., T.** [NL/NL]; Oosterscheldstraat 12, NL-4535 GC Terneuzen (NL). **BANK, David, H.** [US/US]; 2931 Horizon Lane, Midland, MI 48642 (US). **DION, Robert, P.** [US/CH]; Waidlistrasse 32, CH-8810 Horgen (CH). **BAR, Georg, K.** [DE/NL]; Archimedesstraat 27,

Published:

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: REACTIVE HOT MELT ADHESIVE

(57) Abstract: A reactive hot melt composition, having a softening point of at least 50 °C, and being curable on heating to a temperature of 150 °C. The composition comprises a blend of (a) a macrocyclic oligomer having a softening point of at least 50 °C, containing at least one ring having eight or more atoms, and being able to undergo decyclization at a temperature of 150 °C or more, to produce a polymerizable species, wherein each cyclic oligomer molecule provides two or more structural repeat units of the same or different formula for the resulting polymer, and (b) a thermoplastic resin, its use as an adhesive and methods of its application.

WO 2005/090508 A1